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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,513	11/29/2001	Peter J. Armbruster	IRI05441	5018

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MOTOROLA, INC.
CORPORATE LAW DEPARTMENT - #56-238
3102 NORTH 56TH STREET
PHOENIX, AZ 85018

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,513

Applicant(s)

ARMBRUSTER ET AL.

Examiner

Stephen M. D'Agosta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Drawings

The drawings were received on 11-29-01 and have been reviewed by the draftsman and examiner.

Claim Objections

Claim 5 objected to because of the following informalities: the term "said first database" should delete the word "first" since there is no antecedent basis for it.

Appropriate correction is required. Failure to correct will lead to a USC 112 rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 8-18 and 20-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Sonti et al. US 6,108,540 and further in view of Gentry US 6,453,162 (hereafter Sonti and Gentry).

As per **claim 1**, Sonti teaches an HLR (figure 1 #74 which is prior art and/or figure 4a, #350 comprising):

An interface to the HLR for a user to select services (eg. profiles) [figure 7 shows mobile user accessing/changing their profile and Abstract and C2, L34 to C3, L63]; and

But is silent on A personal HLR, not located with the telecommunication service provider and a link to an OSS of the telecommunication service provider for obtaining services.

Sonti teaches a user having access to an HLR function so that they can select/change their profile from a plurality of stored profiles (abstract). Sonti does not limit the scope/design of the patent by dictating where certain hardware is located and/or how it must be connected. Hence, the user just connects to a computer (eg. HLR) and selects which profile to use which reads on "a personal HLR" since the user can modify their profile and custom configure it. Further to this point, Sonti's invention

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can provide access either directly to the HLR and/or to any other distributed computer which is not the HLR (eg. not located with the telecommunications service provider) since client-server systems are known in the art and provide de-centralized communications/interaction between client user and server program(s). Lastly, Sonti's system inherently provides for a link to/between the service provider for obtaining service since the outcome is the same as the applicant's (eg. the user can change their service profile) and thus requires any/all cellular network components to be informed of the change. *OSS systems are well known in the art – ref. figures from Boltz or Rouhollahzadeh (not cited) which show interconnections from OSS to various network components including HLR, MSC, VLR, etc.*

Gentry teaches access to an HLR via the Internet (abstract and figures 2-3 and C2, L15-41 which describes a web server, eg. "personal HLR" not located with the service provider, that receives user profile changes and forwards them to the HLR for updating). Gentry's system also inherently requires a link to/between an OSS of the telecommunication service provider for obtaining services. The examiner notes, but does not cite, Alperovich as teaching a similar functionality as well (see abstract, figures and Detailed Description).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that it comprises a personal HLR, not located with the telecommunication service provider and a link to an OSS of the telecommunication service provider for obtaining services, to provide means for a user to modify their HLR profile without having to talk to a customer service representative.

As per **claim 2**, Sonti in view of Gentry teaches claim 1 **but is silent on** further including a network HLR coupled to the OSS of the telecommunications service provider.

Sonti teaches one HLR. Gentry teaches a web server, that acts similar to a personal HLR and that connects to the network HLR (see figure 2, personal computer #48 connects to web server/personal HLR #44 which connects to network HLR #17). *OSS systems are well known in the art – ref. figures from Boltz or Rouhollahzadeh (not cited) which show interconnections from OSS to various network components including HLR, MSC, VLR, etc.*

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that further including a network HLR coupled to the OSS of the telecommunications service provider, to provide means for the user to modify their HLR profile and transmit it to the cellular network system components (ie. OSS, HLR, etc.).

As per **claim 3**, Sonti in view of Gentry teaches claim 2 wherein there is further included a plurality of users (abstract teaches allowing "subscribers change their features") **but is silent on** each having an individual HLR within the network HLR indicating said services which are available to each user.

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Gentry teaches a web server, that acts similar to a personal HLR to connect to the network HLR (see figure 2, personal computer #48 connects to web server/personal HLR #44 which connects to network HLR #17). This web server will provide for individual access accounts (via log-in/password) and thus reads on "each having an individual HLR within the network HLR indicating said services which are available to each user".

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that each having an individual HLR within the network HLR indicating said services which are available to each user, to provide an interface for the user to customize their HLR profile to add/delete services/features (without need for a customer service rep).

As per **claim 4**, Sonti in view of Gentry teaches claim 3 **but is silent on** wherein the individual HLR for a particular user includes a pointer to the personal HLR.

The examiner notes that pointers are well known in the art and provide means for identifying a starting/ending point with regard to a specific function/service. Sonti teaches multiple feature lists/profiles (figure 4a) which a user can select from and one skilled would use pointers to show a user which features/profile they are currently using.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that the individual HLR for a particular user includes a pointer to the personal HLR, to provide means for identifying what/which services have been selected (eg. are pointed to) from the personal HLR and which features are available to send to the network HLR.

As per **claim 6**, Sonti in view of Gentry teaches claim 1 wherein there is included a database for subscription information, said database coupled to said OSS (abstract teaches default profile and features which can be selected from to create other profiles and reads on subscription information).

As per **claim 8**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein said personal HLR includes a computing device.

Gentry teaches a computer connecting to a web server/computer (eg. personal HLR) [figure 2].

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said personal HLR includes a computing device, to provide means for the system to be hosted on a computing device (eg. server).

As per **claim 9**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein said link includes an internet connection of said personal HLR to said OSS.

Gentry teaches use of an Internet connection to connect from a personal computer to a web server (eg. personal HLR) to cellular network components which include an MTSO/MSR, HLR and inherently includes an OSS (see figure 2).

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said link includes an internet connection of said personal HLR to said OSS, to provide connectivity no matter where the user is located as long as they can access the Internet.

As per **claim 10**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein said link includes a wireless connection between said personal HLR register and said OSS.

Gentry teaches a wireless data server connection (figure 2, #42) between the user and web server (eg. personal HLR) and the cellular network components. The examiner also points out that a wired connection can be replaced with a wireless connection by one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that wherein said link includes a wireless connection between said personal HLR register and said OSS, to provide means for the user to be mobile as they connect to and modify their HLR profile.

As per **claim 11**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein said link includes a wireline connection between said personal HLR and said OSS.

Gentry teaches a wireless data server connection (figure 2, #42) between the user and web server (eg. personal HLR) and the cellular network components. The examiner also points out that the wireless connection can be replaced with a wired connection by one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said link includes a wireline connection between said personal HLR and said OSS, to provide means for a wired link to be used and not use their wireless minutes when changing their HLR profile.

As per **claim 12**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein said interface includes a GUI interface.

Gentry teaches an Internet connection between user (figure 2, #48) and web server (#44) and would inherently include a GUI interface as are well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said interface includes a GUI interface, to provide an easy-to-use interface such as a web/GUI interface.

As per **claim 13**, Sonti teaches an HLR arrangement for a telecommunication service provider (figure 1 #74 which is prior art and/or figure 4a, #350), said arrangement comprising:

Database means for storing subscriber information for a plurality of subscribers, said database means coupled to said telecommunications service provider, said telecommunication service provider operating in response to a request from said

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processor means to obtain said subscriber information for a particular subscriber [figure 7 shows mobile user accessing/changing their stored profile that inherently requires a database, Abstract and C2, L34 to C3, L63);

But is silent on Processor means including the HLR, said processor means operating independent of the telecommunications service provider, and said processor means coupled to said telecommunications service provider for communication.

Sonti teaches a user having access to an HLR function (which contains a processor) so that they can select/change their profile from a plurality of stored profiles (abstract). Sonti does not limit the scope/design of the patent by dictating where certain hardware is located and/or how it must be connected. Hence, the user just connects to a computer (eg. HLR) and selects which profile to use which reads on "a personal HLR" since the user can modify their profile and custom configure it. Further to this point, Sonti's invention can provide access either directly to the HLR and/or to any other distributed computer which is not the HLR (eg. not located with the telecommunications service provider) since client-server systems are known in the art and provide decentralized communications/interaction between client user and server program(s). Lastly, Sonti's system inherently provides for a link to/between the service provider for obtaining service since the outcome is the same as the applicant's (eg. the user can change their service profile) and thus requires any/all cellular network components to be informed of the change. *OSS systems are well known in the art – ref. figures from Boltz or Rouhollahzadeh (not cited) which show interconnections from OSS to various network components including HLR, MSC, VLR, etc.*

Gentry teaches access to an HLR via the Internet (abstract and figures 2-3 and C2, L15-41 which describes a "web server", eg. personal HLR/processor not located with the service provider, that receives user profile changes and forwards them to the HLR for updating). Gentry's system also inherently requires a link to/between an OSS of the telecommunication service provider for obtaining services. The examiner notes, but does not cite, Alperovich as teaching a similar functionality as well (see abstract, figures and Detailed Description).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that there is a Processor means including the HLR, said processor means operating independent of the telecommunications service provider, and said processor means coupled to said telecommunications service provider for communication, to provide a hardware system (eg. server) which can be accessed by the user to modify their HLR profile without contacting a customer service representative.

As per **claim 14**, Sonti in view of Gentry teaches claim 13 **but is silent on** further includes link means for coupling said processor to said telecommunications service provider.

Gentry teaches communication means/links that connect the user, web server/processor and cellular network components (see figure 2).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that it includes link means

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for coupling said processor to said telecommunications service provider, to provide means for the user to send profile changes from a server/computer to the network HLR via a communications link.

As per **claim 15**, Sonti in view of Gentry teaches claim 14 **but is silent on** wherein said link means includes an internet connection.

Gentry teaches use of an Internet connection to connect from a personal computer to a web server (eg. personal HLR) to cellular network components which include an MTSO/MSO, HLR and inherently includes an OSS (see figure 2).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said link means includes an internet connection, to provide user access to make HLR profile changes no matter where they are as long as they can access the Internet.

As per **claim 17**, Sonti in view of Gentry teaches claim 14 **but is silent on** wherein said link includes a wireline connection.

Gentry teaches a wireless data server connection (figure 2, #42) between the user and web server (eg. personal HLR) and the cellular network components. The examiner also points out that the wireless connection can be replaced with a wired connection by one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that said link includes a wireline connection between said personal HLR and said OSS, to provide means for a wired link to be used and not use their wireless minutes when changing their HLR profile.

As per **claim 18**, Sonti in view of Gentry teaches claim 13 wherein:

Said database means includes a database for storing telephone subscription information (figure 4a shows multiple features/profiles, eg. subscriptions);

Said particular subscriber inputs a change to the HLR to modify Sonti in view of Gentry the telephone subscription information of the first database (abstract teaches default profile and features which can be selected by the user to create other profiles and reads on subscription information).

As per **claim 20**, Sonti in view of Gentry teaches claim 13 **but is silent on** wherein the service provider includes a network HLR for pointing to the HLR of the processor means.

The examiner notes that pointers are well known in the art and provide means for identifying a starting/ending point with regard to a specific function/service. Sonti teaches multiple feature lists/profiles (figure 4a) which a user can select from and one skilled would use pointers to show a user which features/profile they are currently using.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that the individual HLR for a particular user includes a pointer to the personal HLR, to provide means for identifying

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what/which services have been selected (eg. are pointed to) from the personal HLR and which features are available to send to the network HLR.

As per **claim 21**, Sonti teaches an arrangement for an HLR (figure 1 #74 which is prior art and/or figure 4a, #350) comprising:

An HLR located within a processor means (figure 1 #74 which is prior art and/or figure 4a, #350)

A telecommunication service provider including a network HLR (figure 4a, #350)

But is silent on HLR processor within a particular user; and said service provider coupled to said processor means, said network HLR pointing to said personal HLR.

Sonti teaches a user having access to an HLR function (which contains a processor) so that they can select/change their profile from a plurality of stored profiles (abstract). Sonti does not limit the scope/design of the patent by dictating where certain hardware is located and/or how it must be connected. Hence, the user just connects to a computer (eg. HLR) and selects which profile to use which reads on "a personal HLR" since the user can modify their profile and custom configure it. Further to this point, Sonti's invention can provide access either directly to the HLR and/or to any other distributed computer which is not the HLR (eg. not located with the telecommunications service provider) since client-server systems are known in the art and provide decentralized communications/interaction between client user and server program(s). Lastly, Sonti's system inherently provides for a link to/between the service provider for obtaining service since the outcome is the same as the applicant's (eg. the user can change their service profile) and thus requires any/all cellular network components to be informed of the change. *OSS systems are well known in the art – ref. figures from Boltz or Rouhollahzadeh (not cited) which show interconnections from OSS to various network components including HLR, MSC, VLR, etc.*

Gentry teaches access to an HLR via the Internet (abstract and figures 2-3 and C2, L15-41 which describes a "web server", eg. personal HLR/processor not located with the service provider, that receives user profile changes and forwards them to the HLR for updating). Gentry's system also inherently requires a link to/between an OSS of the telecommunication service provider for obtaining services. The examiner notes, but does not cite, Alperovich as teaching a similar functionality as well (see abstract, figures and Detailed Description).

The examiner notes that **pointers** are well known in the art and provide means for identifying a starting/ending point with regard to a specific function/service. Sonti teaches multiple feature lists/profiles (figure 4a) which a user can select from and one skilled would use pointers to show a user which features/profile they are currently using.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that HLR processor within a particular user; and said service provider coupled to said processor means, said network HLR pointing to said personal HLR, to provide a hardware system (eg. server) which can be accessed by the user to modify their HLR profile without contacting a

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customer service representative and which uses pointers to identify which features have been selected.

As per **claim 22**, Sonti in view of Gentry teaches claim 21 **but is silent on** wherein the user affects changes to the personal HLR via communication between the processor means and the telecommunication service provider.

Gentry teaches access to an HLR via the Internet (abstract and figures 2-3 and C2, L15-41 which describes a "web server", eg. personal HLR/processor not located with the service provider, that receives user profile changes and forwards them to the HLR for updating). Gentry's system also inherently requires a link to/between an OSS of the telecommunication service provider for obtaining services.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that wherein the user affects changes to the personal HLR via communication between the processor means and the telecommunication service provider, to provide means for the user to modify their HLR profile without need of contacting a customer service representative.

As per **claim 23**, Sonti in view of Gentry teaches claim 21 **but is silent on** wherein the service provider includes traditional network HLR for other users.

Gentry teaches a web server (eg. personal HLR) that connects to a network HLR for other users (figure 2).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that wherein the service provider includes traditional network HLR for other users, to provide means for the system to interconnect to and interoperate with traditional, currently fielded cellular networks access.

Claims 5 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Sonti in view of Gentry and further in view of Daniels US 6,058,301 (hereafter Daniels).

As per **claim 5**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein there is further included a database for storing roaming information, said database coupled to said OSS.

Daniels teaches a service node checks a database stored in the data storage units 36 and 38 to determine the roaming privileges of the cellular phone 16. Preferably, the database comprises both a Home Locator Register (HLR) 36 for storing roaming information (roaming privileges and identifying information) for subscribers of the home service area 20 and a Visitor Locator Register (VLR) 38 for storing roaming information for subscribers of the foreign service areas 22, 24, or 26, that are currently roaming in the home service area 20 (C5, L58 to C6, L5).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that there is further included a database for storing roaming information, said database coupled to said OSS, to

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monitor the user as they roam and provide the visited network with their HLR profile (as has been selected by the user).

As per **claim 19**, Sonti in view of Gentry teaches claim 13 **but is silent on** wherein;

Said database means includes a database for storing roaming information; and

Said particular subscriber inputs change to the HLR to modify the roaming information within the distributed HLR.

Daniels teaches a service node 34 checks a database stored in the data storage units 36 and 38 to determine the roaming privileges of the cellular phone 16. Preferably, the database comprises both a Home Locator Register (HLR) 36 for storing roaming information (roaming privileges and identifying information) for subscribers of the home service area 20 and a Visitor Locator Register (VLR) 38 for storing roaming information for subscribers of the foreign service areas 22, 24, or 26, that are currently roaming in the home service area 20 (C5, L58 to C6, L5).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that there is further included a database for storing roaming information, said database coupled to said OSS, to monitor the user as they roam and provide the visited network with their HLR profile (as has been selected by the user).

Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Sonti in view of Gentry and further in view of Sistanizadeh et al. US 6,681,232 (hereafter Sistanizadeh).

As per **claim 7**, Sonti in view of Gentry teaches claim 1 **but is silent on** wherein there is further included other networks coupled to said OSS, said other networks supplying service level agreement (SLA) information.

Sistanizadeh teaches The full flexibility of the operations support system is realized particularly by means of a Service Level Manager (SLM) 100, as shown in FIG. 1. The main functions of the service level manager 100 are to check and report on the "health" of the underlying network and to make sure that the network delivers services to customers as promised, e .g. in accord with service level agreements (SLAs) between the carrier and the customers (C6, L49-56).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry, such that there is further included other networks coupled to said OSS, said other networks supplying service level agreement information, to provide SLA data to/from any cellular network to ensure that the user receives the services they have selected for their HLR profile as they roam.

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Claim 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Sonti in view of Gentry and further in view of Gallant et al. US 5,802,468 (hereafter Gallant).

As per **claim 24**, Sonti in view of Gentry teaches claim 23 **but is silent on** wherein;

The particular user is charged a first rate for the personal HLR; and

The other users are charged a second rate for the traditional network HLR.

Gallant teaches a billing computer coupled to the memory of the common database for calculating a first cost of service for the mobile station when the first level of mobile service is provided to the mobile station, for calculating a second cost of service for the mobile station when the second level of mobile service is provided to the mobile station, and for calculating a third cost of service for the mobile station when the third level of mobile service is provided to mobile station (C4, L12-20).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sonti in view of Gentry such that The particular user is charged a first rate for the personal HLR and The other users are charged a second rate for the traditional network HLR, to provide means for monitoring and charging for use of this service.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Alperovich et al. US 6,269,244
2. Nguyen US 5,564,068
3. Vuoristo et al. US 6,603,969
4. Hussain et al. US 6,591,105
5. Lim US 6,182,087

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta

A handwritten signature in black ink, appearing to be 'SD' or 'D'Agosta' in a stylized cursive script.